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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,764	09/17/2003	Nobuhiro Kira	107355-00087	3831

7590

10/14/2005

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EXAMINER

PHAN, HAU VAN

ART UNIT	PAPER NUMBER
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3618

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/663,764	KIRA ET AL.	
	Examiner	Art Unit	
	Hau V Phan	3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/21/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgment

1. The amendment filed on 8/30/2005 has been entered.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 6/21/2005 has been considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-6, 8 and 10-11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schaper (5,934,397) in view of Mizushina et al. (5,085,071).**

Schaper in figures 3-11, discloses a hybrid vehicle comprising an engine (52) for driving main driving wheels (48), and a plurality of motors (34, 36, 38) for driving sub driving wheels (33), wherein at least one motor is selected from the plurality of motors to drive the sub driving wheels according to driving force required by the vehicle. Schaper fails to show a speed reduction member.

Mizushina et al. in figures 2-3, teach a driving power source unit comprising motors (101, 102) having a speed reduction gear (2), which is disposed directly between the motors. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the hybrid vehicle having a plurality of motors of Schaper with the motors having a speed reduction gear locating between the motors as taught by Mizushina et al. in order to selectively outputting driving torque of sole motor and combined torque of both motors.

Regarding claim 2, Schaper discloses the sub driving wheels, which are driven by all the motors at low speed where the driving force required by the vehicle is large (col. 6, line 29-37, Schaper discloses the used of all the motors during a pulling of heavy load, the vehicle should be at the low speed when in heavy load).

Regarding claim 3, Schaper discloses a main motor (36) having a large output and a sub motor (34) having a small output. The sub motor being disposed on an upstream side of the main motor to a direction in which the driving force is transmitted to the sub driving wheels.

Regarding claim 4, Schaper discloses a clutch (72) for interrupting the transmission of driving force, which is disposed between the sub motor and the main motor.

Regarding claim 5, Schaper discloses the plurality of motors and each motor is independently connected to batteries (32). It should be noticed that the motor with higher output should be connected to a high-voltage battery and the motor with lower output should be connected to a lower voltage battery.

Regarding claim 6, Schaper discloses the plurality of motors having a main motor and a sub motor and wherein a battery for driving the main motor is charged with regenerative power of the main motor and the sub motor is driven by generated output of a generator (54), which is driven by the engine. (During the pull of the heavy load).

Regarding claim 10, Mizushina et al. teach a main motor and a sub motor, which are connected to the sub driving wheels via the speed reduction member.

Regarding claim 11, Mizushina et al. teach the speed reduction member comprising a first gear operationally connected to the sub motor and a second gear operationally connected to the main motor.

Regarding claim 13, Mizushina et al. teach the second gear, which is operationally connected to a differential via a synchromesh clutch.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schaper (5,934,397) in view of Mizushina et al. (5,085,071) as applied to claim 11 above, and further in view of Toyoda et al. (5,289,890).

The combination of Schaper and Mizushina et al. disclose the first gear, but fail to show an electromagnetic clutch.

Toyoda et al. in figures 17-18 prior art of record, teach a drive unit for electric motor vehicle having an electromagnetic clutch (47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the hybrid vehicle having a plurality of motors of Schaper in view of Mizushina et al. with the drive unit having an electromagnetic as taught by Mizushina et al. in order to selectively outputting driving torque of sole motor and combined torque of both motors.

Response to Arguments

6. Applicant's arguments with respect to claims 1-6, 8, 10-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau V Phan whose telephone number is 571-272-6696. The examiner can normally be reached on 7:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christ Ellis can be reached on 571-272-6914. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hau V Phan
Primary Examiner
Art Unit 3618

Hau Phan
9/30/05